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SANTA CLARA COUNTY'S TRANSPORTATION PLANNING STUDY

INTERIM STUDY REPORT

Governmental Influences on Growth

April, 1967

AUG 28 1967

Donald C. Dwyer

San Jose Transportation
planning program of
county and city government



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COUNTY OF SANTA CLARA CALIFORNIA

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TRANSPORTATION PLANNING STUDY

OFFICE OF THE COUNTY EXECUTIVE HOWARD W. CAMPEN, COUNTY EXECUTIVE
COUNTY ADMINISTRATION BUILDING 70 WEST HEDDING STREET
CIVIC CENTER SAN JOSE, CALIFORNIA 95110 299-2424

April 7, 1967

Santa Clara County
Transportation Policy Committee
San Jose
California

Gentlemen:

The objective of the Santa Clara County Transportation Planning Study is to produce a long-range plan as a guide for building a transportation system to the needs of this county's urban growth. The purpose of the process being followed by the study staff and consultants is to bring as much of science to bear as possible (within the limits of time, funding, and technical capability) to the problem.

Therefore the development of plans is logically assigned to the last 12-15 months of the study (from fall 1967 through fall 1968), and the first 20 months (November 24, 1965 to fall 1967) are spent in taking measurements about this county which lead to clarifying the demand for transportation.

In addition to the time consuming and costly efforts during the first phase of the study, devoted to measurements of transportation demand, the scientific method employed by the study also calls for a clarification of goals and preliminary observations (based on current information) about the County and its transportation problems.

The attached report: "Government Influence on Growth" is in the category of a preliminary observation. It reviews the role that government and private enterprise have had on shaping the County's growth in the post World War II period. It also makes some preliminary, tentative observations about future transportation systems. These tentative observations are generally supported by the Environmental Attitudes Study presented at the March 8, 1967, Transportation Policy Committee meeting.

However, it must be emphasized that this report provides only preliminary observations. No conclusions about future systems can

Santa Clara County
Transportation Policy Committee

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April 7, 1967

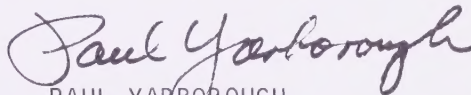
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be drawn until later during the planning stage when specific plans are tested in terms of the measurements of demand.

This study is also useful because it reveals the existing, implied planning goals of this county based on the cumulative policies, attitudes, and effects of both government and private enterprise.

In this light, and with the above qualifications as to the tentative nature of its observations, I take pleasure in presenting this report, prepared by the Planning staff.

Yours very truly,



PAUL YARBOROUGH

Transportation Study Manager

PY:js

Attachment

cc: Technical Advisory
Committee of TPC



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INTERIM STUDY REPORT

GOVERNMENT INFLUENCE ON GROWTH

SANTA CLARA COUNTY
COMPREHENSIVE TRANSPORTATION
AND LAND PLANNING STUDY

April 1967

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I. PURPOSES AND SCOPE OF STEP 1-2

The objective of this study according to the Transportation Study Work Program was "to establish the influence that governmental jurisdictions have had on the growth of the County and to determine what influence these jurisdictions are likely to have on the future County growth".

For the purposes of this report, "growth" was defined as the evolution of the land development pattern in Santa Clara County, rather than growth in the sense of economic development.

The study was conducted with the following purposes in mind:

1. to explain generally how the present land use pattern came to be and how government helped make it so. In addition, to point out what tools are available to shape the growth pattern;
2. to delineate the existing and committed systems of public facilities and utilities which will serve, along with the known plans of the private sector, as the basis for considering different ways that future land development may occur;
3. to suggest various public choices for future land development in the County.

As developed, the study included a review of Federal, State and Regional agencies operative in the County, Santa Clara County itself, and cities and special districts within the County. The kinds of influence these governments "exert" were categorized broadly as: legal; fiscal; organizational-administrative; planning and research; and land disposition and capital construction.

II. SUMMARY OF REPORT ON GOVERNMENTAL INFLUENCE ON GROWTH

The private sector has exerted major leadership in shaping the broad pattern of land uses in Santa Clara County. Within a market context developers, lenders, builders, and consumers make countless decisions on the location of houses, businesses and factories. In general, the role of governments, and particularly local governments, has been one of accommodating private enterprise in its determination of the broad arrangement of land uses we see in Santa Clara County.

This arrangement of land uses is characterized by extensive, low-density, residential development and by the dispersal and segregation of centers of business, industry, and entertainment. The spread-out, low-density residential pattern and the dispersed centers of business and industry result from a great variety of factors like changes in taste, technology, family status, the level of personal incomes, family and individual mobility, communications and mass media. These factors appear likely to cause further dispersal of residential, commercial and selected industrial land uses in the future.

A great variety of federal, state and local policies and programs have been pursued, consciously and otherwise, to both passively permit and actively promote the pattern of land development that has occurred in the County. These policies and programs include the Department of Housing and Urban Development single family mortgage insurance programs; Veterans Administration and state Cal-Vet mortgage guarantee programs; the State's Uninhabited Annexation Act, Subdivision Map Act, Special Districts Act, and school aid programs; city annexation, zoning and urban utility extension programs; federal aid for local streets and freeways; state motor vehicle license fees, gas tax funds, and the local city and county share of the retail sales tax.

The capital improvement policies and programs of local government in Santa Clara County also influence the overall pattern of land development. In general, the cities, special districts, and the County have built water importation and distribution systems, sewerage systems, freeways, expressways, local street systems, and public buildings for education and civic affairs in such a way as to support extensive, low-density residential land development and dispersed and segregated centers of business, industry and recreation.

The provision of water and sewerage systems have commanded highest priority in the list of public services needed to support land development. In the past, cities, special districts, and public utility companies have been able to build sewerage and water systems in response to, or in anticipation of, urban development.

Similarly, the city-county expressway system and the separate street systems built by each city have been developed into a complex network that will in time link every corner of the valley. Similarly, the county, the cities, the junior college districts and high school districts are in the process of creating a collection of civic centers,

educational facilities, community activity centers, cultural centers, and regional parks that are located throughout the valley. Generally, each kind of public facility may be found in its own pattern, as these facilities have been located to serve specific user populations. Thus, for example, the pattern of existing and proposed cultural and entertainment facilities is different from the pattern of civic centers, which in turn is different from the pattern of shopping centers and older business districts.

It is obvious from the results that the cities, the County and the school districts are not building public facilities (much less zoning for private land uses) to achieve a deliberate policy of concentrating many kinds of activities in a few central cores or even in what might be called suburban centers.

"Trying to keep up with rapid growth" is how most of our local governments view their role. This is the conclusion suggested by the sum total of past zoning and planning decisions and the style in which cities, the County, and special districts have built urban facilities and services. Their programs and policies appear to be based on the assumptions that the private sector itself is largely responsible for deciding the broad distribution and kinds of land uses and that the job of our local political and administrative organization is merely to help this development occur. Up to the present time, therefore, special districts, many of the cities, and the County have not assumed a highly creative role as active shapers to the overall land use pattern.

Scattered development in all undeveloped portions of the valley will be the cumulative effect of continuing our present land development policies. This would permit future development in the Milpitas, Berryessa, Evergreen, Edenvale, Morgan Hill, Gilroy, Almaden Valley, South San Jose, Palo Alto Hills, West Hills, and the Bayland areas. To the extent that market demand for land development is less than the amount of land "opened up" by annexations, street and utility extensions, and the granting of urban zoning, some development will likely occur in all of these areas, but in a scattered manner in each area. If current city and county and zoning and utility extension policies remain the same, in time the entire north valley and probably most of the south valley will be developed in low-density residential uses, with dispersed centers of business, industry, leisure, and education.

This summary has briefly described the overall land use pattern that has developed Santa Clara County. Various federal, state, and especially local government policies and programs affecting this pattern of development have also been discussed.

IT IS OBVIOUS THAT THE EXISTING LAND DEVELOPMENT PATTERN MUST BE THE STARTING POINT FOR DESIGNING ANY FUTURE TRANSPORTATION SYSTEM, AND PARTICULARLY A MASS TRANSPORTATION SYSTEM. FURTHER, WHETHER CITIES AND SPECIAL DISTRICTS CONTINUE THEIR PRESENT LAND USE POLICIES OR INITIATE NEW POLICIES WILL HAVE AN EFFECT UPON THE KIND OF MASS TRANSIT SYSTEM THAT WILL BE FEASIBLE IN THE FUTURE IN SANTA CLARA VALLEY.

THE HISTORY OF DEVELOPMENT IN THE COUNTY IS EVIDENCE OF THE RESULTS WHEN PRIVATE ENTERPRISE TAKES THE LEAD AND THE CUMULATIVE GOVERNMENT POLICY IS ESSENTIALLY ONE OF "ACCOMMODATION". THE OPPORTUNITY EXISTS, HOWEVER, VIA THE TRANSPORTATION PLANNING STUDY AND THE TWO COUNTY-WIDE COMMITTEES FOR TRANSPORTATION POLICY AND PLANNING POLICY TO CONSIDER MODIFICATIONS IN POLICY WHICH CAN EFFECT FUTURE DEVELOPMENT AND CONSEQUENT TRANSPORTATION REQUIREMENTS.

Section V of this report suggests some policy changes that the cities and county may choose in regard to future land development. Observations are also offered on the kinds of transportation systems, particularly mass transit systems, that appear to be feasible in this country based upon the kind of land development that has already occurred.

III. THE INFLUENCE OF GOVERNMENT ON LAND DEVELOPMENT: THE PRIVATE SECTOR

- A. Introduction: A common truism in planning is that land development is jointly shaped by the actions of free enterprise and of government. The broad, valley-wide arrangement of land uses is primarily the result of thousands of private decisions--to invest, to locate a home or business, to build. These private decisions are partly determined by a complexity of government influences. The process of land development is a serious game in which the more dominant players are consumers, developers, lenders, builders and building industry unions. These players' activities directly shape the pattern of land uses, parcel by parcel. The game rules they play by are the rules of the market place; the building-lending industries tend to provide what the consumers want. In a real sense, then, the overall shape of the physical environment--the city--is about what people want it to be.

The role of government in the game of land development is less dominant than that of the private sector. Government's role has been to provide much of the facilities needed to play (e.g., streets, sewers, water), to insure a measure of fair play (e.g., public hearings, zoning away incompatible uses), and to increase the players' participation (e.g., Federal mortgage insurance).

The pattern of land uses developed so far in Santa Clara County is characterized almost solely by decentralization. Some of the forces causing this dispersal of shops, factories and homes have been described in a recent Rand Corporation report. Although these comments are written in a national context, they readily apply to the Bay Area and to Santa Clara County.

"Indeed, without much question, the overwhelming impact of technological changes, recent and remote, on urban locations or structure has been to reduce densities and disperse functions. Containerization, the jet age, telecommunications, mechanized methods of materials handling, continuous processing, do-it-yourself deliveries, automation--all these connote recent technological changes that have had a decentralizing influence on the location of urban job opportunities. The ability of Americans to afford decentralized residential locations, private yards, and automobiles as their incomes have risen has, of course, strengthened the trend toward urban dispersal. These decentralizing influences have been only slightly counter-balanced by other developments, particularly in the performance of managerial control functions (especially in regional or national headquarters cities). These underlying forces for decentralization almost surely would have been set in motion, moreover, with or without the assistance or hindrance of public policy, since they stem from fundamental changes in technology, income levels, family status and consumer tastes."¹

(1) Meyer, J., Kain, J. and Wohl, M. The Urban Transportation Problem, Harvard University Press, Cambridge. 1965. page 24.

Note that these forces, in broad context, are outside the ken of government and that for the foreseeable future they are likely to cause further dispersal of the private uses of land.

Thus, the role of Federal, State and local governments in Santa Clara County can be viewed more as one of supporting and permitting, but not determining, the overall land use pattern which has so far evolved. It is private enterprise, in the form of builders and lenders responding to consumer demand, that has created an extensive, low-density land use pattern in Santa Clara County. On the whole, this land use pattern appears to be acceptable, if not desirable, for most people. This spread-out pattern permits them to achieve many goals which have, in part at least, spatial connotations. Among these goals are personal ones (e.g., a home of my own with a garden, away from where I work), business goals (location near markets, suppliers, or supporting services), and leisure goals (access to parks, scenic areas, cultural and entertainment facilities).

- B. The Existing Pattern of Land Uses: One purpose of this study is to explain generally how the present land use pattern came into being and in what ways government helped to determine this pattern. A variety of federal, state, and local government policies and programs affect the way in which the private market operates to develop land in Santa Clara County. The cumulative effect of the influences exerted by all three levels of government has been to accommodate the evolution of a low-density, extensive land use pattern. The more important federal, state and local influences are summarized below. In the following sections, governmental influences are described in terms of the conventional major land use categories--residential, commercial, and industrial. This method of description focuses attention on the complexity of governmental organization policies and programs and how these have accumulated to help produce the pattern of land use as we know it in the County.

1. Residential Uses: The history of residential land development in Santa Clara County is well known. It mirrors the experience of countless communities across the nation that faced rapid postwar urban development. The obvious chief characteristics of residential land use pattern are its extensiveness and its low density. The pattern is extensive in the simple sense that the predominant housing type, single family detached, requires much more land to house a given population than does, for example, the San Francisco and Oakland townhouse. The term "low density" includes apartment densities such as are exhibited by cluster developments, fourplexes, and townhouse developments throughout the County.

It is important to distinguish the concept of extensiveness from the idea of scatter. In Santa Clara County extensive development happens to have a configuration of scatter instead of contiguity. That is to say, in addition to extending over a large area, there are areas of development scattered among agricultural or vacant lands.

Responsibility for this unfortunate condition is divided among state and local government, land owners and land developers. The factors

that combine to cause scatter are:

- state legislative policy to assess land on market value instead of use value, thus raising the tax the land owner must pay;
- the necessity, and in many cases the eagerness, of rural land owners to offer their land for sale for urban uses;
- the natural tendency of land developers to bypass over-assessed and overpriced rural land in favor of cheaper land, further removed from existing urban development;
- the willingness of cities and county to grant urban zoning and extend urban facilities and services to these outlying developments;
- and the absence, until recently, of any local or State government effort to seek correction of the State Assessment Code.

If the above factors causing scatter did not exist when the Valley first began to urbanize, it is likely that developers would still have built in an extensive, low-density residential pattern in response to home buyers' preferences. New development would have been far more contiguous to existing development since most developers would have preferred to hook on to nearby utilities and streets. In other words, extensive low-density residential development is a market response to consumer preferences. Extensive development that is scattered, however, results from the state and local assessment land development policies cited above and the resultant action by land owners and developers in response to these policies.

2. Commercial Uses: Two previous publications of the County Planning Department, Land Use Issues (1963) and Commercial Land Needs (1964), sufficiently describe the pattern of commercial uses in Santa Clara County. Briefly restated, the parts of this pattern are: shopping centers; highway-oriented strips; older business districts; and offices, banks, and clinics. The shopping centers form an ever-expanding system of neighborhood, community and regional facilities. These centers are generally well spaced, though notable exceptions of competing, badly located centers can be found. Highway-oriented strips have blossomed along the major roads that once connected the separate agricultural communities in the valley. The older business districts, or "downtowns," have met various fates according to the way local business men and city councils responded to the shopping center boom. Some downtowns remain vital retail centers on a par with shopping centers; but most have experienced relative or absolute decline as retail centers. The locational characteristics of offices, banks and clinics vary greatly. Many are found along commercial strips; many are dispersed throughout the valley; and some are located in the older business districts, and some in shopping centers.

3. Industrial Uses: Reference is made again to previous County Planning Department reports, Industrial Land Needs (1965) and Land Use Issues (1963), that describe the existing pattern of industrial uses and suggest what their future distribution will be. The term industry includes not only manufacturing firms but also truck terminals, warehouses, storage yards and the like.

Most of the industrially used land in the County is strung in loose clusters along two broad corridors, each paralleling freeways and railroads. The Southern Pacific and Bayshore Freeway define one corridor, Western Pacific and Highway 17 the other. Aerospace industries (ordnance and electrical manufacturing) dominate the northwestern portion of the Bayshore-SPRR corridor, while greater diversity is found in the southeastern portion and along the Highway 17-WPRR corridor.

Proximity to educational and research facilities, access to freeways and rail, pleasant climate and living areas for high priced talent, and linkages to suppliers and subcontractors are among the locational considerations of the aerospace firms in the Bayshore-SPRR corridor.

Older industrial areas are located near the original downtowns or scattered along the rail lines as in south-central San Jose.

Dispersed throughout the County are isolated large sites such as IBM (Cottle Road), Ford, Permanente, and UTC. For these sites important locational considerations were: the search for cheap land; the desire to be a "big business" in a small community; proximity to raw material; and freedom to conduct nuisance or hazardous operations.

- C. Governmental Influence: The important Federal, State and Local policies and programs that have accommodated the evolution of a low density extensive residential pattern, are summarized below.

The mortgage insurance programs of the Federal Housing Administration and the guarantee programs of the Veterans Administration and Cal-Vet, coupled with substantial increases in personal income, made it possible after World War II for increasing numbers of families across the nation to exercise their preference for single family housing. The majority of people who migrate to Santa Clara County are well able to exercise this preference.

In the past, The State Uninhabited Annexation Act empowered cities to annex large, virgin territories upon agreement with a handful of owners. Urban zoning, services and facilities could be extended to whatever sites were proposed for development.

The Local Agency Annexation and Formation Commission Act of 1963 provided a means for "objectively reviewing" the merit of proposed annexations. The creation of LAFCO in 1963, however, came too late to make much difference in the basic pattern of land development in Santa Clara County as described in this report. By 1963 most of the cities in the County had individually decided what kind of

land development they would accommodate. Annexation minded cities had already roughed out their ultimate spheres of influence.

LAFCO, however, still may play a vital role in determining the location of future land development throughout the County. Bayland and hillside development; the location and size of possible new towns; the formation of new cities; and possible merger of existing cities.

The State Subdivision Map Act, while requiring cities and counties to regulate design within subdivisions, neither imposes restrictions nor sets guidelines and incentives for the location of subdivisions within the overall pattern of land development.

Various State codes governing special districts permit the formation of autonomous governments. In the past, many of these proceeded with single-minded devotion to provide an essential urban service -- streets, sewers, or water, for example. The existence of many small special districts in the County abetted extensive and scattered development, since the provision of at least one essential urban service usually allowed a developer to proceed. A large number of districts, their public "invisibility" and consequent absence of voter control precluded public discussion of alternative ways land might have been allowed to develop.

The District Reorganization Act of 1965 and amendments to the Local Agency Annexation and Formation Commission Act of 1963 have resulted, in Santa Clara County at least, in a substantial reduction in the number of special districts.

The redistribution of revenue, collected statewide, through State School Aid Programs, allows local school districts to provide new schools wherever and whenever new subdivisions open. Without such aid it seems likely that local school districts would press for city, county or state control over the location of subdivisions. Similarly it is likely that many home buyers would not purchase in unschooled subdivisions.

In the past, city governments, overrun by population increase pressured for additional tax bases, or eager to "grow big", willingly extended urban facilities, especially sewers and streets, to whatever scattered sites developers proposed to build on. These municipal governments and the County were equally willing to approve, almost anywhere, zoning for residential uses and supporting commercial and other uses.

Local governments are enabled to expand their roadbuilding programs with the massive assistance of Federal Primary, Secondary, and Urban Extension Funds and State motor vehicle licence fees and gas tax funds.

The cities' one cent share of the retail sales tax is often an important influence in the location of commercial development. In order to expand their retail sales tax base, some cities actively seek new shopping centers to locate in their jurisdiction, particularly along the perimeter.

In Santa Clara County, governmental policies and programs fostering concentration of people in high densities and compact and contiguous development are virtually nil. San Jose's Park Center Renewal Project represents the single major instance of a local government effort to bring about high density residential development. The scale of Park Center project, however, is too small to affect materially the countywide residential land use pattern.

It is readily apparent, that on a countywide basis, the composite effect of these governmental policies and programs has been and remains one of overwhelming support of low density, extensive pattern of residential land use.

Local government's influence on the commercial land use pattern in the county has been of two varieties.

In some cities, the responsibility for sizing and locating commercial facilities remains in the private sector. Shopping center developers anticipate the retail needs and tastes of expanding populations, outline market areas, select the sites, and design the structures to accommodate the needs of these markets. In such municipalities zoning decisions merely confirm the location decisions made by the developers. As stated earlier, cities will often court new shopping centers in order to increase retail sales taxes. This kind of municipal eagerness for revenue has permitted the creation of several "Surplus" competitive centers, some of which remain incomplete.

On the other hand, some municipalities, particularly the residential cities in the west hills, maintain clear policies regarding the number and location of shopping centers needed to serve local population. By firmly adhering to these policies, they have probably suppressed some shopping centers, and other kinds of commercial development that would otherwise have been built in competition with existing centers. Los Gatos, Saratoga, Los Altos, Palo Alto and Sunnyvale are examples of cities generally following this latter commercial development policy.

Several Cities, as well as the County, have also assumed a highly permissive role with offices, banks, and clinics and strip commercial development. The active agents of commercial land development - lenders, builders, firms and institutions - determine the amount and location of commercial and office structures that are needed. On the whole, many local governments have done little to require clustering of new commercial uses or the channeling of strip development into well defined segments along major arterials. Were local governments to do so, the pattern of commercial uses would still be characterized as dispersed though much "tidier".

The most populous city in the County with some opportunity to develop its down-town into a truly "urbane", office - cultural - entertainment center has followed conflicting policies. Thus

San Jose promotes concentration of office functions in the core (e.g., Community Bank Building, P.T. & T. Building), while simultaneously fostering decentralization (e.g., Wells-Fargo Building, at Hedding and the Alameda, the Swenson Building, on North First Street). Palo Alto on the other hand, generally adheres to a policy of strongly encouraging only those office structures which are proposed for downtown.

The cities and County have influenced the pattern of commercial uses in another and negative manner. Collectively, they have excessively overzoned for commercial uses by a 3 to 1 margin.

Such speculative overzoning has boosted the "market" value of many parcels so high that they may not be developed at all for a long time. Thus government helps to create pockets of "urban vacant" land within built up areas.

This study did not investigate specific ways in which Federal, State, and local governments influence location decisions of industrial firms. The brief comments that follow are based upon general observation.

Most of the factors which determine the locational pattern of industries appear to lie beyond the province of local government. As with commercial and residential land uses, the role of cities and county has been one of responding to the locational preferences of industry. The granting of zoning, creation of industrial parks, extension of industry-serving utilities and services, and aggressive promotional programs are means by which local governments have accommodated firms in their selection of sites.

- D. Likely Future Pattern of Land Uses: In general we can expect the spreading pattern of new land development to continue, if no effort is made to the contrary. At the same time there are no easy conclusions about changing densities of residential use and concentrations of commercial use within the urban area. For the planning period of the Transportation Study, the future residential and commercial land use pattern will substantially be the one we now have.

A new surge of family formation, as the World War II babies continue to marry, is just around the corner. Santa Clara County can expect to share (to some unknown extent) in the next wave of residential construction to house these new families. The pattern of industrial uses is less predictable. The kind of industrial activities that decide to locate here will determine how the existing pattern of industrial uses will evolve.

It is difficult to foresee in detail how current governmental influences on residential land use will evolve in the future. With Congress and various federal agencies in an experimental mood regarding urban affairs, it is possible that dramatic changes in federal home mortgage policies and federal aid to communities for streets, sewers, beautification, etc. will come

about. In time the State of California may develop its subdivision map act into a means for rationally determining the location of new subdivisions. On the other hand, it is unlikely that the state will modify its complex School Aid programs for the single purpose of attempting to affect the pattern of land use. Within the county, cities with a mind for aggressive annexation will probably continue to expand until their spheres of influence are filled in. Improvement in the State's property assessment policy and local use of the Williamson bill to preserve large blocks of agricultural land would help to reduce scattered development. On the whole, however, low density residential development will still be sought by the consumer, provided by market conscious developers, and accommodated by cooperative local governments.

In regard to commercial land use, one may expect more shopping centers located in newly developed residential areas. Some of the larger and older centers may evolve into "suburban downtowns" with business and cultural-entertainment uses locating on the periphery of the retail center. Signs of this incipient trend are the four indoor theaters near Town and Country (Valley Fair) and the one at Moonlite. To the extent shopping centers do develop in this manner, they will reduce the potential for concentration of entertainment-cultural and office type activities in the older business districts.

The Commercial Land Needs report indicated that most older business districts have little potential for growth as retail centers. This judgment is still valid for Campbell, Mountain View, and Morgan Hill. Since that report was published, there appears to have been no dramatic changes in downtown businessmen's attitudes or city policies regarding these downtown areas.

Older business districts in Los Altos, Sunnyvale, and Palo Alto should maintain their absolute size. Completion of the Santa Clara Urban Renewal project remains uncertain, as does the eventual creation of a multi-purpose sports convention entertainment complex promoted both separately and jointly by Santa Clara and San Jose. Completion of San Jose's museum-theater-library complex and Park Center Renewal Project would give the central area a measure of "big city diversity".

In summary, the dispersal of commercial and office activities has been in response to changes in merchandising techniques, automation, communication, and the location of consumer markets. Many local governments' zoning and planning influences have been to permit and encourage this dispersal, but not to shape significantly the pattern. As noted earlier, several cities carefully determine the approximate number, size and location of needed shopping centers and permit only these. For purposes of transportation planning the future promises to be a continuation of the past.

The pattern of future industrial use is less predictable than for commercial and residential uses. How the existing pattern of industrial uses evolves in the next 20 to 30 years depends on the kinds of industries that choose to locate in the county. To the extent the aerospace industries expand, most of this growth will certainly occur in the Bayshore-SPRR corridor, as existing firms expand on site and new firms move in, attracted for the same reasons as the ones already there. Local governments - San Jose, Santa Clara, Sunnyvale, Mountain View and Palo Alto, will continue their competitive solicitation of new firms in order to "improve the tax base" or amortise their investments in industry-serving facilities.

As freeway and expressway sites are completed and as the value of vacant land in built up industrial areas edges upward, many firms will locate in a dispersed pattern throughout the North and South valleys. These will be firms without close linkages to associated manufacturing, supplying or marketing firms.

We should expect, at unexpected places and times, proposals by firms to locate in outlying isolated sites, e.g., the recent FMC weaponry test facility. The previous history of local government cooperation, if not aggressive encouragement, in the establishment of such isolated sites suggests how they will react to future proposals of this kind.

- F. Summary: Primary leadership in determining the overall shape of the physical city has been exercised by the private sector. In a market context, consumers, developers, lenders make countless decisions on the location of houses, shops and factories; these collectively form the physical city. The broad role of Federal, State and particularly local governments has been mainly one of permitting and encouraging private enterprise to determine the broad arrangement of land uses that we observe in Santa Clara County.

For the planning period of the Transportation Study, the overall pattern of land uses may be regarded as fixed. The bulk of structures in the valley are new. For example, 54% of our housing supply of 288,000 (April 1966) is less than 10 years old, 75% of it has been built since the Korean War began in 1950. The great majority of factors influencing location decisions -- changes in taste, technology, personal income, etc.-- portend continued dispersion of residential, commercial and selected industrial uses.

IV. INFLUENCE OF GOVERNMENT ON LAND DEVELOPMENT: THE PUBLIC SECTOR

- A. Introduction: This section discusses the capital improvement policies and programs of local governments in Santa Clara County.¹ Sewerage systems, freeways, expressways and local streets, water importation and distribution systems, higher educational facilities, and public buildings and facilities are considered in a qualitative vein. Assuming continuation of existing city or special district policies, the probable future influence on land development of each kind of facility is indicated. Such quantitative information as was readily available is included.

There is remarkable consistency among the likely effects on private land development of each kind of facility. Simply put, each system--sewers, streets, water supply, public buildings--on the whole is being used to support extensive, low density land development. The collective impact of these systems is obvious. The special districts providing sewers or water tend to rely heavily upon city and county land development policy as expressed in their general plans and zoning practices.

- B. Water Supply: This urban service is described in two parts: importation and conservation, and local distribution.

1. Importation and Conservation. It is generally agreed that the cumulative capacity of the Santa Clara County Flood Control and Water District, the Santa Clara Valley Water Conservation District, the South Santa Clara Valley Water Conservation District, and the Hetch-Hetchy system is sufficient to satisfy countywide water demand through the mid-1970's. In the long run, through year 2020, the availability of water is not expected to be a constraint on the amount or location of land development, if the proposed Pacheco Pass Aqueduct is completed on schedule.

In the unlikely event that the Pacheco Pass Aqueduct failed to materialize, other options remain. The South Bay Aqueduct could be increased in capacity or Santa Cruz mountain runoff could be diverted through the Pajaro River gap. In either case, the time needed to shape an organization and secure financing would become a constraint on the timing of land development.

By 1990-2000, countywide demand is expected to be about 500,000 acre feet annually. Commercial water companies and Hetch-Hetchy will supply about 100,000 acre feet. The Pacheco Pass Aqueduct is slated to import 200,000 acre feet. The remaining 200,000 acre feet will be supplied by South Bay Aqueduct and the drawoff from local underground aquifers.

Footnote

¹ A series of map overlays at one inch to the mile was prepared for this report. Each overlay graphically presents an existing utility or facility system and its proposed extension. These maps are available for review at the County of Santa Clara Planning Department, Rm. 314, 70 West Hedding Street, San Jose - 299-2521.

In designing the in-county distribution system, the Santa Clara County Flood Control and Water District adopted a life expectancy lasting through 2020.

Changes in the proportions of land devoted to agricultural and urban uses will not change total future demand for water, because agricultural, industrial and municipal consumption rates per acre are closely similar.

There are four major water conserving and importing agencies operative in Santa Clara County. (Since this report was written, negotiations have begun to combine the first three agencies listed below into one county-wide water importation district.)

The Santa Clara County Flood Control and Water District (formed in 1951) is a water-importing and wholesale distribution agency. Its boundaries are coterminous with Santa Clara County. The district is administered by a manager-counsel responsible directly to the Board of Supervisors. Its current functions are to contract with the State Department of Water Resources to purchase water imported through the South Bay Aqueduct; to construct an in-county distribution system and treatment plants for the purpose of distributing (a) raw water for agricultural use or ground percolation, and (b) treated water to municipal agencies and commercial companies.

The Santa Clara Valley Water Conservation District (formed in 1929) is governed by an independent Board of Directors and maintains its own staff. Its general boundaries are the valley floor north of Morgan Hill. The district's function is to collect and store runoff through a system of dams, percolation ponds and interconnecting channels. The district purchases untreated South Bay Aqueduct water from the Santa Clara County Flood Control and Water District for percolation to ground water.

The South Santa Clara Valley Water Conservation District (formed in 1938) collects and stores runoff in the valley floor south of Morgan Hill. Currently, it has no plans for importation of water.

The City of San Francisco wholesales water via its Hetch-Hetchy system to the north county cities of Milpitas, Sunnyvale, Mountain View and Palo Alto to supplement their local sources, and to the Purissima Hills County Water District.

There is, in addition, a Tri-County Water Authority created to coordinate the water importation policies of Santa Clara, San Benito and Santa Cruz Counties and to negotiate with the U.S. Bureau of Reclamation for importation of Pacheco Pass

Aqueduct water. Santa Clara County is represented on this Authority by the Santa Clara Valley Water Conservation District. This interim advisory Authority will dissolve upon solution of the mutual importation problems.

2. Local Distribution. The four major water conserving and importing agencies provide the broad organizational and physical framework for getting water to the county. Within the county, localized distribution of water is achieved by a variety of local governments, commercial water companies, mutual water companies, and private sources (such as Stanford). These water distribution agencies draw from the resources provided by the Santa Clara County Flood Control and Water District, Santa Clara Valley Water Conservation District, the South Santa Clara Valley Water Conservation District, and Hetch-Hetchy, and from their own individually developed sources.

In the past, both municipal agencies and commercial companies have been able to match closely water supply with increasing demand. The countywide community, through its public and private water supplying agencies, has always assigned highest priority among available financial resources to the provision of water. There is no reason why this collective attitude should not continue to prevail. Hence, for purposes of the Transportation Study, it may be assumed that localized water distribution will not be a constraint on the location or timing of land development within flatland subareas of the County.

Generally, hillside development should not be constrained by engineering difficulties in supplying water uphill. Constraints may appear in select locations and for certain periods of time, however, because of financing. Construction and operating costs for water supply may be sufficient to upset the financial feasibility of certain developments proposed at too high elevations. No attempt was made in the Governmental Influence Study to map hill areas where such financial constraints might be imposed. As a generality, of course, it may be assumed that the lowest several hundred feet of hillsides will be free of such constraints.

The following agencies locally distribute by far the bulk of water used within the County:

Municipal Water Departments (10) Alviso, Cupertino, Gilroy, Milpitas, Morgan Hill, Mountain View, Palo Alto, Santa Clara and Sunnyvale have adequate systems for present demand. All these cities assume they will be able to extend their systems as required by likely future land development within their spheres of influence.

Although San Jose (Evergreen) services only a small portion of the incorporated area of the city, future development in the Evergreen area should not be constrained by lack of water, given the current city policy on utility extension.

Special Districts (1) Purissima Hills County Water District services mainly the Los Altos Hills area.

Commercial Water Companies (6) The following companies (having over 250 connections) are under the authority of the California State Public Utility Commission. The service area of each company must be certificated by the Public Utilities Commission. There is little overlap between the service areas of commercial water companies and municipal departments. The boundaries of each company expand or contract often as subdivisions are built and municipal annexations occur.

*Aldercroft Heights serves a small area near the Santa Cruz County border. Its future plans are unknown. California Water Service Company, Campbell Water Company, and North Los Altos Water Company have stable service areas. San Jose Water Works and Great Oaks Water Company expect to expand their service areas and system capacities to meet demand. All companies demonstrated complete confidence that water will be available and that they will be capable of distributing it throughout the foreseeable future.

Commercial water companies with less than 250 connections, mutual water companies, and specialized private sources were not surveyed as part of the Governmental Influence Study.

- C. Sewerage Systems: Within Santa Clara County, responsibility for the construction and maintenance of sewerage systems is divided among municipalities and special districts.

Along with water supply, the provision of sewers has commanded equally high priority in the list of public services needed to support land development. In the past, cities and districts have been able to build sewerage systems in response to or in anticipation of development. Consequently, extensive low density development has been supported by official willingness to provide sewerage facilities "on demand." There is every expectation that this attitude will remain. For most cities, the provision of future sewer facilities can be thought of not as a constraint but as an inducement for land development. (Since this report was written, the Bay Area Water Quality Control Board has questioned the ability of several South Bay

*Correction: Aldercroft Heights formed as special district 6/27/58.

cities to properly treat sewage at their municipal treatment plants. The outcome of this State-local issue is unpredictable at the moment. A strict interpretation of State water quality standards and a forceful demand by the Water Quality Control Board for local compliance could result in some kind of constraint on local agricultural production activity or even residential development.)

Municipal Sewer Departments (12) Alviso, Los Altos Hills, Mountain View, Santa Clara and Sunnyvale have fairly complete systems. Cupertino, Gilroy, Los Altos, Milpitas, Morgan Hill, Palo Alto and San Jose are planning or building major extensions to their systems. San Jose has a complex of agreements with Santa Clara and all special districts (except Las Encinas) to receive and process their sewage.

Campbell, Los Gatos, Monte Sereno and Saratoga have no municipal systems but are serviced by special districts.

Special Districts (7) Burbank, Sunol, Las Encinas, and County Sanitation Districts No. 2 and 3 serve fairly stable areas. Both Cupertino Sanitary District and County Sanitation District No. 4 have master plans and financing programs for extending their service areas significantly.

The current policies and future intentions of San Jose are well documented in the City's Capital Improvement Program 1966-71. The sewerage system extensions outlined therein will permit broad scatteration of low intensity development for the next 10-15 years in Berryessa, Evergreen, Coyote, Morgan Hill, Edenvale and Almaden Valley areas.

Morgan Hill and Gilroy are considering a joint system based upon a 1964 South County Sewerage Study by A. D. Little, Inc.

Hillside development is assumed by the planned extension of Palo Alto, Cupertino Sanitary District, County Sanitation District No. 4 and San Jose sewerage systems (in the Evergreen and Coyote areas).

D. Traffic Circulation System: Santa Clara County's auto-dominated transportation system is described according to its component subsystems.

1. State Freeways. Compared to other highly urbanized counties, the existing freeway system in Santa Clara County is a modest one providing for through-county and intra-county movement. As the system has been built to date, it appears to have been a supportive factor in the land boom

of the past fifteen years, though hardly dominant among the forces causing development.

The freeway system proposed on the County Expressway Plan represents a communitywide consensus on what a completed system should be like. As segments of this system are built, the freeways will handle an increasing proportion of intra-county travel. Completion of Capitol, South County and West Valley Freeway segments, especially, will insure the continuation of extensive, low density residential developments and will also offer options for dispersing employment centers.

A major option open to the countywide community is to formulate a position for or against the Bay Front Freeway. A position, once taken, would be a major factor in causing or precluding land development in the bayshore area.

2. Expressway System. Santa Clara County and its sixteen cities are cooperatively constructing a countywide expressway system. This system provides for major intra-county automobile circulation and forms an intermediary network linking the State freeways within the county with local city street systems.

Broadly conceived, the expressway program includes three phases. Phase I, originally scheduled for the period 1961-1969, consists of a total of 82 miles authorized financing and design. Construction of various segments of this authorized system is well along. According to the County Public Works Annual Expressways Report 1965, "the expressway program is well on its way toward relieving the backlog of needs caused by yesterday's growth insofar as major traffic arterials are concerned." Both the 1965 and 1966 Expressway Reports note, "Construction will not necessarily be completed on all of the routes to provide finished roadways during the current program. Oregon-Page Mill, Central, Foothill, Lawrence and San Tomas will be completed interim facilities during the authorized bonding effort. Almaden Expressway between Hillsdale and Coleman is being completed with funds provided by the bond program and other local and State sources...Santa Teresa Boulevard will be completely planned, but construction is expected to be nominal. Guadalupe is scheduled for right-of-way purchases only so that construction can proceed as a State freeway. Capitol-Hillsdale between Narvaez and Tuers was added to the Phase I system for right-of-way purchases only. Interim construction between Almaden and Aborn is currently in process or complete."

A list of Phase II projects has been developed as a basis for public discussion. These projects involve mainly the widening and completion of the Phase I system. In the Fall of 1966,

public discussion of how to finance Phase II resulted in a search for financing other than a bond program. As of early 1967 no definite financing scheme or timetable had been agreed upon.

Coupled with the street extension programs of most of the cities, the expressway program has helped bring about, and will sustain, the valleywide pattern of land development that has occurred.

3. Major Arterials. Perhaps nowhere else is the interaction of street construction and land development better demonstrated than in Santa Clara Valley. Over the years the network of arterials has gradually expanded from a system of farm-to-market roads and city streets in separately identifiable communities to a complex network of major arterials (4 or more lanes) soon to link every corner of the valley.

The City-County Trafficways Plan of 1965, supplemented by the circulation elements of city general plans, displays the collective past activities and future intentions of road building agencies in Santa Clara County.

The basic network of major arterials supporting extensive, relatively low density residential development and dispersed activity centers has been solidly established. Proposed future construction, as outlined on various city general plans, the City-County Trafficways Plan of 1965, and city capital improvement programs, indicates that the basic network will be expanded to cover completely the flat parts of the north and south valleys. The cumulative effect of carrying out these proposals will be to increase local access in the Milpitas-Berryessa, Evergreen, Edenvale, Morgan Hill, Gilroy, Almaden Valley, South San Jose, Palo Alto hills, and Mountain View bayland areas. To the extent that market demand for land is less than the amount of land "opened up" by these street extensions, some development will likely occur in all these areas and in a scattered manner within each area.

- E. Public Buildings and Facilities: In the past 15 years, the cities and County have constructed a diversity of public-serving facilities. These include the larger civic centers and community centers, major cultural-recreational-sports-entertainment facilities, high schools, junior and state colleges, private universities and colleges, major hospitals, the Economic Opportunity Commission's Area Service Centers, and some smaller hospitals in or near low-income areas.

(Small civic centers, fire stations, main and branch libraries, neighborhood and district parks and local recreation centers were not considered in this report. Yet, like elementary schools, they cumulatively support the extensive pattern of development by being close to where people live.)

When this great variety of public facilities, both existing and proposed, is plotted on a map, a pattern appears. The chief characteristics of this pattern are dispersal and segregation by kind of facility.

Civic centers, junior colleges, community activity centers and regional parks are scattered unevenly through the valley, reflecting the fractionated governments which created them. Nor are these facilities closely intermixed as in the classical high-density downtowns of older cities in the nation. This scatteration reflects the segregation of their service area populations according to income, age and interest.

Thus, for example, we find a pattern of existing and proposed cultural-entertainment facilities that includes community theaters at Foothill and De Anza Colleges; a 5,000-seat community center in Sunnyvale; a 10-12,000-seat multi-purpose sports-convention center somewhere near Santa Clara-San Jose boundary; San Jose's 6,000-seat Civic Auditorium and 3,300-seat Fine Arts Theater; San Jose State College's Spartan Stadium and the San Jose Bees' baseball stadium; and community-oriented campus facilities in the Saratoga, Campbell, North Santa Clara and East San Jose areas. All these cultural-entertainment facilities are located away from civic centers. These, in turn, are segregated from the older business districts; for example, as in Santa Clara, Sunnyvale, Palo Alto and Milpitas.

The implications for transportation planning of this pattern of segregated and dispersed facilities are clear. Local governments have built and continue to propose public facilities that are located to serve specific user populations or where sites are inexpensive. Cities, the County and school districts are not building public facilities (much less zoning for private land use) to achieve a deliberate policy of concentrating many activities in a central core or suburban centers.

Each kind of facility--educational, governmental, cultural-entertainment--generates its own pattern of travel demand. This pattern does not coincide very well spatially or temporally with the travel demand pattern of other facilities. There appears to be limited "piling up" of worker, shopper and student travel patterns on the same routes, at the same time, for the same destinations. Thus, dispersal and segregation by

type of public facility suggests that automobiles and buses will continue to be required, on the basis of present technology, for intra-county transportation. The potential for fixed rail transit to meet intra-county travel demand appears limited; however, firm conclusions about the feasibility of future rail transit will have to wait until travel demand has been forecast by the Transportation Study late in 1967.

Any map showing the location of various public facilities throughout the valley can be interpreted, within limits, to demonstrate that several activities are concentrated in the San Jose central business area. If this interpretation is made, it is important to realize that the "concentration" (whether of workers, shoppers or theater-goers) appears to be only marginally greater than concentration at other points in the valley. The activities which are found in the San Jose central business area--retail shopping, offices, cinema, concerts, sports events--can be found in half a dozen other places in the valley, each of which has equivalent attractiveness with San Jose. If transportation policies are to be designed to make San Jose the foremost central area in the County, they may well be made in the context of promoting San Jose as the first among equals, but not as a predominant center.

- F. Higher Educational Facilities: Generally, the provision of educational facilities has kept pace with demand. Four junior college districts and ten high school districts are building what amounts to a countywide system of fairly well distributed campuses.

The high school and elementary school districts have exerted an important influence on the pattern of land development in Santa Clara County by supporting low density, scattered land development.

The State Department of Education provides equalization grants and loans available to all qualifying districts for operating costs and capital construction loans. This financial assistance is designed to aid districts in rapidly developing areas. Thus, the State Department of Education, in effect, supports scatteration by redistributing public funds to help school districts expand whenever and wherever localized land development occurs. The availability of State aid thus precludes local districts from seeking land development controls which they might otherwise do. It is improbable that the complex of State Law regarding aid to school districts will soon change. Extensive development in Santa Clara County will continue to be supported by the redistribution effects of these laws.

The junior colleges and several of the high schools have important implications for the Transportation Study. These facilities are locally important traffic generators, both in the daytime and at night. The junior colleges either already serve as community activity centers or have publicized their intentions of doing so. State aid is available to the junior college districts for cultural and educational events (lectures, exhibits, conferences) tailored to the needs of the adult population within the "sphere of influence" of the districts. Thus, facilities for cultural and entertainment events are becoming partially available in a dispersed pattern throughout the valley. To this extent, the junior colleges reduce the potential of the older business districts to serve as urban cultural-entertainment centers.

San Jose State College, the University of Santa Clara, and Stanford University are additional major traffic generators to which the above observations generally apply.

- G. Summary: Cities, the County, school districts and special districts have permitted and encouraged low density, extensive land development. Most of these local governments view their role as one of "trying to keep up with rapid growth." Their programs and policies appear to be based on the implied assumptions that the private sector, alone, is largely responsible for deciding the broad distribution and kinds of land uses, and that government's job, at most, is to help this development occur. These assumptions are consistent with a traditional, though narrow, concept of the role of local government.

Up to the present time, special districts, most of the cities and the County have not assumed much of a creative role as active shapers of the broad land use pattern. For example, in most cities and the County, there simply are no legislative policies that commercial and office uses shall be concentrated in "downtowns" or suburban clusters, or that urban zoning and streets and sewers shall be withheld from large areas of undeveloped land.

The Local Agency Formation Commission has required each city to work out joint boundary agreements with its neighbors. These municipal boundary agreements, coupled with existing joint city boundaries, now make it possible to delineate the sphere of influence or "ultimate" extent of most of the sixteen cities.

At this writing, the ultimate boundaries of Alviso, Campbell, Los Gatos, Milpitas and Santa Clara are virtually "fixed." Los Altos, Los Altos Hills, Monte Sereno, Mountain View, Saratoga and Sunnyvale retain options for slight to moderate territorial expansion. San Jose's north and south boundaries are settled, but the city is free to annex as far east as it desires. An agreement between San Jose and Los Gatos permits the latter city to annex in the west foothills. Cupertino has yet to file agreements on its western borders; there are indications it may seek to expand to the Santa Cruz County Line. In the South County, the ultimate extent of Morgan Hill and Gilroy is unpredictable.

Given the land development policies of each city, and the relative vigor with which these policies are carried out, these boundary agreements offer excellent indication of which subareas of the county are likely to develop and what that development will be. If current city and county zoning and utility extension policies remain the same, in time the entire north valley and probably most of the south valley will be developed in low density, residential uses, with dispersed centers of business, industry, leisure and education. Hillside development will be well underway. The accumulative effect of continuing the present land development policies of local governments will be to permit future development in the Milpitas, Berryessa, Evergreen, Edenvale, Morgan Hill, Gilroy, Almaden Valley, South San Jose, the west hills and the bayland areas. To the extent that market demands for land development are less than the amount of land "opened up" by annexations, street and utility extensions, and the granting of urban zoning, some development will likely occur in all of these areas, and in a scattered manner in each area.

V. INFERENCES FOR TRANSPORTATION PLANNING

The Framework for Policy Making

The report on governmental influences has considered the ways in which Santa Clara Valley's cities, county, special districts, and school districts make policies shaping our development. In the past, our various levels and types of governmental agencies for the most part, arrived at policies independently of one another. Our present complex urban society requires that we use these various agencies to coordinate programs, and work toward common goals.

Recognizing this need for coordination of development policies, the Inter-City Council and Board of Supervisors recently have created a Planning Policy Committee with representatives from all cities and the county. The Planning Policy Committee has decided that its first priority of business would be to review the countywide General Plan and the development goals contained in that plan. This Planning Policy Committee is an appropriate committee to promote intergovernmental agreement upon the broad land development goals and policies which the cities, the county, special districts, and school districts could follow in the future. In its deliberations on transportation policy, the Transportation Policy Committee will want to consider these countywide development goals and policies before final decisions can be made regarding a balanced transportation system.

The Influence of Transportation Policies on Development

The "Government Influences on Growth" study suggests that, in the past, the communities of the Valley have used local government so as to have little influence on the location and type of private development. This seems to have been the case in spite of the fact that through government we make large investments in the construction and/or maintenance of street systems, sewer systems, water systems, recreational facilities, educational facilities, etc., that are needed by the private developer in order that he may build when and where he chooses.

As the provision of transportation facilities are such an important factor in private development, it might be suggested that government should be in a position to exert strong influence on private development through transportation policies and programs, regardless of whether other areas of governmental control are strong or weak.

The following are examples of transportation programming that influences development: (1) The Toronto (Canada) rapid transit encourages concentration; (2) the Almaden Expressway encourages dispersion; (3) the Hamilton New Town would be impossible without an investment of millions of dollars for roads.

To date the cities and county have planned and built a metropolitan network of major streets and expressways complementing the state highway programs. While generally designed to "meet immediate needs," an additional effect of the network has been to afford access to most areas of the valley and thus permit widely scattered low density development.

It is reasonable to suggest that future countywide transportation programs, well conceived and executed, will also have substantial effect on the amount and kind of development to take place in Santa Clara County. Consideration of the impact of transportation on development makes it possible to add that effect to other policies and programs in order to achieve community goals.

The Consideration of Specific Travel Modes

The following material discusses the present major transportation modes, with regard to how government policies on land use affect transportation planning, and how government could influence land development if certain transportation policies were to be followed.

No inferences can be drawn from this review about regional rapid transportation systems, i.e., the advisability of ties to BARTD or WBRTA for Bay Area service. The following observations are directed to the problem of travel movements within Santa Clara County.

1. The Automobile:

In addition to its continuing importance in intercounty and interregional travel, the automobile will continue to be a prime mode of transportation for intracounty travel. This is indicated by Santa Clara County's land use pattern which is characterized by extensive, low density residential development and the dispersal and segregation of centers of business, industry, education, entertainment, and government. High median income (\$8,700 per year in 1965), high car ownership per family, and the convenience and flexibility of autos in "time, direction and place of movement" are additional factors that portend continued widespread use of the auto.

2. Buses:

Based on the land use pattern that has been built so far, at present it appears that the most promising mass transportation system for intracounty travel would utilize buses on the system of thoroughfares, expressways, and freeways in the county. The following are suggested criteria for an intracounty mass transportation system that may be met by a bus system. These suggested criteria are exploratory for the purposes of this paper. Other criteria may be considered as the study program develops.

Flexible routing: many different centers of relatively low concentration of people must be connected (rather than a few centers with very high concentrations of people).

Flexible expansion: the system must be able to expand easily and economically to new areas of the valley if these are developed.

Flexible scheduling: different user groups must be served at different times of the day, of the week, and of the season.

Relatively low capital investment for the system and the vehicles. The investment allocated to mass transportation should be judged against the resources needed for other kinds of public facilities.

Convenient enough to compete with the private automobile, thereby attracting sufficient riders to be economically feasible. The transit system will have to compete in terms of travel time, out of pocket cost, and comfort in getting the passenger from his trip origin to his trip destination, assuming he has the choice of using a private auto.

Vehicles should be a type economically replaceable in case of a major breakthrough in transportation technology.

Vehicles should be a type that can capitalize on the existing heavy investment in streets and expressways.

The mass transportation system should be capable of use as a feeder system, if a regional rail rapid transit system is appropriate later.

In spite of the apparent adaptability of buses to present development conditions and policies, there is no guarantee that bus service for the valley will be completely self-supporting.

The present policies are not conducive to producing the kinds of large concentrated employment centers or commercial centers which require and will support large scale, "big city" transit systems. If it became the objective to create such an environment certain current land development policies should be revised.

3. Rail Rapid Transit:

Rail rapid transit, in contrast to autos and buses, would definitely require a reconsideration of many development policies presently taken for granted. In considering policy changes and areas in which government influence might be exerted, the following characteristics of rail rapid transit are assumed:

(a) Rail rapid transit would serve primarily a regional function; intracounty utilization would be secondary.

(b) In order to attract the required high volume of passengers, rapid transit requires either (1) high density centers along the route, (2) very heavily traveled corridors, (3) an efficient feeder system from outlying residential areas, and (4) probably a combination of these factors.

(c) Rapid transit fosters high intensity development near stations.

(d) If Alameda and San Mateo counties are part of a Bay Region rapid transit system which excludes Santa Clara County, there may be important consequences for Santa Clara County development. It will be important to identify and analyze such effects in making decisions regarding rail rapid transit.

(e) A rapid transit system extended to the South County would require or create intensive development there.

(f) Many of the criteria mentioned regarding buses would be applicable to rapid transit.

If Santa Clara County is to become a part of a regional rapid transit system, certain land development policies should be considered for revision.

The purpose of revising these land development policies would be to increase the potential for patronage of a rapid transit system and hence decrease the probable subsidy of any such system. Any such policies would likewise tend to reduce probable subsidies to bus systems.

The suggested new policies are:

(a) The cities and County could require most new commercial development to cluster around existing or proposed shopping centers. As examples, indoor theaters, medical-professional buildings, banks, offices, branch governmental facilities such as libraries and health clinics, and perhaps even churches could, by public policy, be located only in recognizable clusters or "suburban downtowns." The result of creating these clusters would be to build up fewer and more intense points of destination for a rapid transit or bus system.

(b) The cities in the County could allow only auto-oriented commercial uses to locate along major arterials. That is, strip commercial development would be retained only for such one-stop shopping purposes as lawn mower repair, boat sales, auto sales, car washes, and the like.

(c) The County and concerned cities could allow little hillside or bayland development of any kind. The justification for this policy would be to help increase residential and employment densities in the already developed flat parts of the valley. (Additional non-transportation benefits would also derive from this policy; the saving of public monies now spent on costly street, sewer and water extensions; shorter runs for fire and other emergency services; preserving the aesthetic value of the hills and their potential use for regional parks.)

(d) The cities and the County could plan and zone so that footloose industries (which are free to locate most anywhere) such as various fabricating, assembly, foodprocessing firms locate in clusters so that modest concentrations of employment activity can be built up as mass transportation destinations. Vallco Park in Cupertino is an excellent example of how to plan a cluster for industry.

(e) The County, cities, special districts, junior college districts and selected high school districts should develop a joint program to build their respective facilities, wherever possible, as joint ventures, as parts of a coordinated area plan, or at least adjacent to one another. Again, the intent is to build up recognizable points of destination for a variety of trips. A realistic example of the kind of "suburban activity center" which might thus evolve is the Kaiser Hospital-Central Park-International Swim Center-City Library-St. Justin's Church-Mariposa Shopping Center complex that is emerging at Kiely Boulevard and Homestead Avenue in Santa Clara.

(f) The cities, County and the Local Agency Formation Commission should develop a firm policy as to whether proposals for any major new town or large scale development in outlying sections of the County are desirable. Such developments may be either assets or liabilities not only to any city involved but also to school districts and to the County. Such proposals raise questions of subsidy by central city taxpayers for the development, costly extensions of urban utilities including perhaps mass transportation, and the lost opportunity to increase residential and employment densities in the already built up portions of the valley.

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